Work Order ID 97830

97830

February-28-13 9:25:52 AM

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Stud

Start Date: 2/28/13 **Start Qty:** 24.00 *24* **Cust Item ID:**
Required Date: 2/28/13 **Req'd Qty:** 24.00 *24* **Customer:**
Reference: rework/w/o's mixed up

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3688	Rev D								
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	**Memo**	0.00							
Quality Control	PULL FROM W/O'S: 6 X D3688-5 B81746 10 X D3688-5 B96692 8 X D3688-5 B82377 INSPECT FROM LAST STEP ON EACH OF THE ABOVE W/O'S (PARTS AND W/O'S WERE MIXED UP)								
210	Identify as per dwg & Stock Location	0.00							
210									
Packaging	**Memo**	0.00							
Packaging	ATTN: HAVE ALL DEVIATIONS (W/O CHANGE/NCR) SIGNED OFF PRIOR TO STOCKING ID & STOCK								

DAS 16 9-8
13/3/6
cuts
X2Y
24 X
13-3-8

Work Order ID 97830

97830

February-28-13 9:25:52 AM

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Stud

Start Date: 2/28/13 **Start Qty:** 24.00 *24* **Cust Item ID:**

Required Date: 2/28/13 **Req'd Qty:** 24.00 *24* **Customer:**

Reference: rework/w/o's mixed up

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop** *NR2*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC21- Final Inspection - Work Order Release	0.00							
220						MCJ		13-03-1L	
QC	Memo	0.00							
Quality Control									

pl 13-03-8

Picklist Print

February-28-13 9:25:51 AM

Work Order ID: 97830

Parent Item: D3688-5

Parent Item Name: Stud

Start Date: 2/28/13 **Required Date:** 2/28/13

Start Qty: 24.00 **Required Qty:** 24.00

Comments: Rev:A New Issue 08-01-29 JLM Veriified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3688-5 Stud		Manufactured	No				Each	0.0000		**24**			

10 x 96692
6 x 81746
8 x 82377

Work Order ID 96692

January-31-13 8:49:21 AM

96692

Item ID: D3688-5
Revision ID:
Item Name: Stud

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Start Date: 1/31/13 **Start Qty:** 10.00 *10*
Required Date: 2/21/13 **Req'd Qty:** 10.00 *10*
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** MLS **Date:** 13-01-31 **Tooling:** **Date:**
QC: **Date:** **SPC (Y/N):** **Date:**

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D3688	**Revision Nbr** Rev D								
100 *100* Bandsaw Jeaspa Bandsaw	BAND SAW **Memo** ***DO NOT USE CHOP SAW***	0.00 0.00	Cut blank 12.020" long	13-2-16		10	0		DAS 13 2-89
110 *110* Doosan Doosan Lathe	DOOSAN LATHE **Memo** 1-Turn as per Folio FA719 Rev: N/A & Dwg D3688 Rev: A 2-Deburr per dwg D3688 3-Check .625" bore with DT9530 GO/NO GO Gauge 13-2-16	0.00 0.00				10	0		DAS 13 2-89
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB **Memo**	0.00 0.00		13-2-16		10	0		DAS 13 2-89

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric to O/S
☐ Cracks
☐ Crushed/Crimped
☐ Cuffs
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Ripples in Bend
☐ Torque Waves in Extrusion
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damaged
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drill Holes
☐ Drawing
☐ Finish
☐ Folio
☐ Grain
☐ Hardware
☐ Inspection Incomplete
☐ Instructions Incomplete/Unclear
☐ Maintenance
☐ Mislabeled
☐ Misread
☐ Offset
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Ovalized
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other _____

Work Order ID 96692

January-31-13 8:49:22 AM

96692

Item ID: D3688-5
Revision ID:
Item Name: Stud

Start Date: 1/31/13 **Start Qty:** 10.00 *10*
Required Date: 2/21/13 **Req'd Qty:** 10.00 *10*
Reference:

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID / Work Center ID	Operation Description	Set Up / Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC8- Inspect parts - second check	0.00							
170 QC Quality Control	**Memo** 100% CHECK,CHECK ALL DIMENSIONS AND THREAD FIT	0.00							
180	PURCHASING	0.00							
180 Purchasing Purchasing	**Memo** Issue P/O: 19183 LPI Per ASTM 1417 LEVEL 2Certificate of conformaty is required	0.00							
190	Receive & Inspect for Damage & Mat'l Certs	0.00							
190 Packaging Packaging	**Memo** Ensure certificate of conformity is attached	0.00							

13.2.26 — 10

13/02/26

13-2-26

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Work Order Update	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

Work Order ID 96692

January-31-13 8:49:22 AM

96692

Item ID: D3688-5
Revision ID:
Item Name: Stud

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Start Date: 1/31/13 **Start Qty:** 10.00 *10*
Required Date: 2/21/13 **Req'd Qty:** 10.00 *10*
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC5- Inspect part completeness to step on W/O	0.00							
200 QC Quality Control	**Memo**	0.00							
210	Identify as per dwg & Stock Location:_____	0.00							
210 Packaging Packaging	**Memo** ATTN: HAVE ALL DEVIATIONS (W/O CHANGE/NCR) SIGNED OFF PRIOR TO STOCKING	0.00							
220	QC21- Final Inspection - Work Order Release	0.00							
220 QC Quality Control	**Memo**	0.00							

see w/o 97830

W138228

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric to O/S
☐ Cracks
☐ Crushed/Crimped
☐ Cuffs
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Ripples in Bend
☐ Torque Waves in Extrusion
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damaged
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drill Holes
☐ Drawing
☐ Finish
☐ Folio

☐ Grain
☐ Hardware
☐ Inspection Incomplete
☐ Instructions Incomplete/Unclear
☐ Maintenance
☐ Mislabeled
☐ Misread
☐ Offset
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions

☐ Ovalized
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

_____
_____
_____

Picklist Print

January 31-13 8:49:25 AM

Work Order ID: 96692

96692

Parent Item: D3688-5

D3688-5

Parent Item Name: Stud

Start Date: 1/31/13 **Required Date:** 2/21/13

Start Qty: 10.00 **Required Qty:** 10.00

Comments: Rev:A New Issue 08-01-29 JLM Veriified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000		Purchased	No			100	f	123.6530	1.087	11.44211			

M174PH-H900R1.000

17-4SS H900 ROUND BAR 1.00

**

13-2-16

DAS 13 89

Location	Loc Qty	Loc Code	
MAT030	123.653		
117445	2.46		
120767	15		1 foot
121280	9.534		1 foot
121918	12.326		
122577	48.333		6 ft
123446	36		2 ft

121280 x 1
120767 x 1
123 446 x 2
122377 x 6

total 10 ft

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
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- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

DART AEROSPACE LTD	Work Order:	96692
Description: Stud	Part Number:	D3688-5
Inspection Dwg: D3688 Rev: E D4		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.692	✓		5-4	Vol4
~~0.625~~ .623	+0.004/-0.000	.625	✓			
1.25	+0.000/-0.03	1.235	✓			
118°	0.5°	118°	✓			
R0.03	+/-0.030	R.03	✓			
0.11 (Ref)	+/-0.030	.11	✓			
90°	0.5°	90°	✓			
~~Ø0.189~~ Ø.216	+0.005/-0.001	.216	✓			
1.31	+/-0.030	1.31	✓			
1.65	+/-0.030	1.65	✓			
0.870	+0.000/-0.010	.866	✓			
Ø0.659	+0.000/-0.015	.651	✓			
11.920	+/-0.015	11.925	✓			
2.90	+/-0.030	2.885	✓			
3/4-16UNF-2A	N/A		✓			
0.075 x 45°	+/-0.010 x 0.5°	075X45°	✓			
0.370	+0.000/-0.010	.366	✓			
~~Ø0.189~~ Ø.216	+0.005/-0.001	.216	✓			
R0.25	+/-0.030	R.25	✓		R.G	
R0.50	+/-0.030	R.50	✓		R.G	
0.20	+/-0.030	.22	✓			

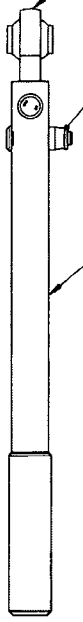
Measured by:	DAS 13 8-89 /
Date:	13-2-16

Audited by:	RP
Date:	13.2.20

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	
C	11.10.13	Dimension 0.20 added	KJ	

ITEM	QTY -047	P/N	DESCRIPTION
1	X	D3688-047	STUD ASSEMBLY
2	1	D3688-7	STUD
3	2	HL32PB8-11	HI-LOK PIN
4	2	HL86-8	HI-LOK COLLAR
5	1	D3693-3	ROD END BEARING



SH
PE
ENG
UNCON
SUBJECT
WI
WO
NO 96692MCJ
13-01-31

RELEASED
2013 -01- 22

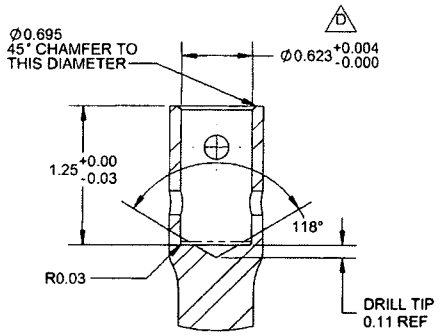
D3688-047 STUD ASSEMBLY

NOTES:
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3688-047 PER DART QSI 044 6.6 (REMOVABLE TAG AND POLY BAG)
7) WEIGHT: 1.03 lbs
8) ALIGN THE PILOT HOLES IN D3693-3 WITH PILOT HOLES IN D3688-7. DRILL OUT EACH HOLE USING A P/N 13-420 PILOTED DRILL (0.2314 DIA./0.2158 PILOT).
REAM EACH HOLE USING A P/N 44-300 STEP REAMER (0.247 DIA./0.2314 PILOT).
CLEAN AND DEBURR ALL HOLES PRIOR TO ASSEMBLY.
9) ASSEMBLE D3693-3 WITH D3688-7 USING HYSOL EA934NA OR MAGNOBOND 6398 ADHESIVE BETWEEN MATING SURFACES.

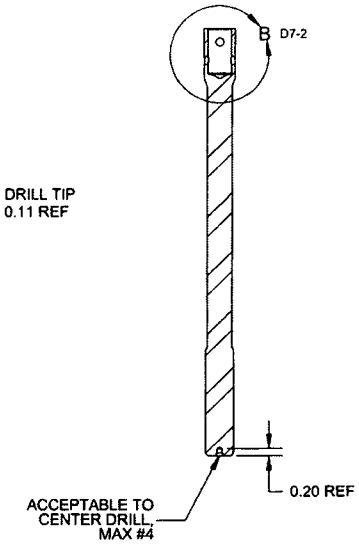
REV.	DESCRIPTION	BY	DATE
D	ADD D3688-047 STUD ASSY; Ø0.216 PILOT HOLE WAS Ø0.189 (ZN D2-2, D4-2, D2-3, D3-3, D2-4, D4-4, D2-5, D3-5); 0.623 WAS 0.625(ZN D7-2, D7-3, D7-4). RE-FORMAT NOTES SECTION AS PER QSI 043 (ZN A8-1); REF NCR12-2074	DB	12.12.05
C	0.20 WAS 0.16 (ZN B5-1, B5-2, B6-3, B5-4); CENTER DRILL #4 WAS CENTER DRILL #2 (ZN B6-1, B6-2, B6-3, B6-4); UPDATE NOTE 8 TO REF QSI (ZN A8-1, A8-2, A8-3, A8-4)	RF	09.09.09
B	CHANGE TO 17-4PH H-900 (ZN A8-1, A8-2, A8-3, A4-4); REDUCE LENGTH ON D3688-1 FROM 12.073 TO 11.573 (ZN C3-1) BASED ON PROTOTYPE INSTALL; Ø0.695 WAS Ø0.665 (ZN D8-1, D8-2, D8-3); Ø0.508 WAS Ø0.478 (ZN D8-4); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22

DESIGN	DB	**DART AEROSPACE LTD**
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA
CHECKED	MB	DRAWING NO. D3688 REV. D
MFG. APPR.	JLM	SHEET 1 OF 5
APPROVED		TITLE STUD
DE APPR.		SCALE NTS
DATE	12.12.05	

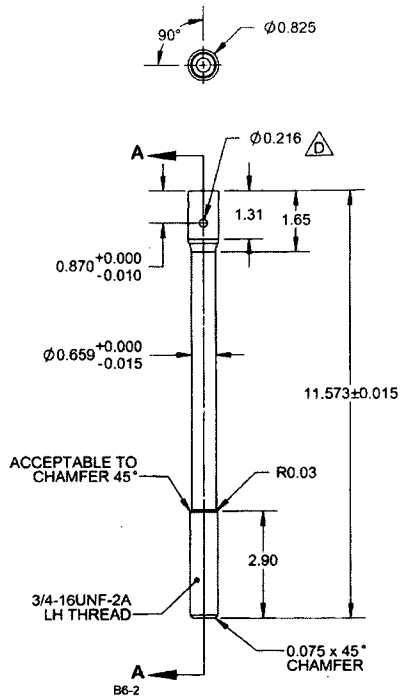
96692

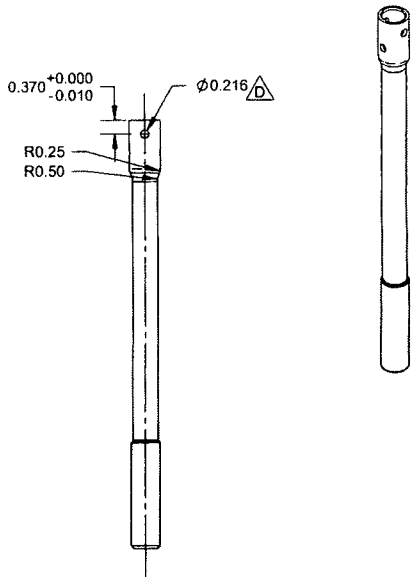


DETAIL B D6-2
SCALE 3X



SECTION A-A
B4-2





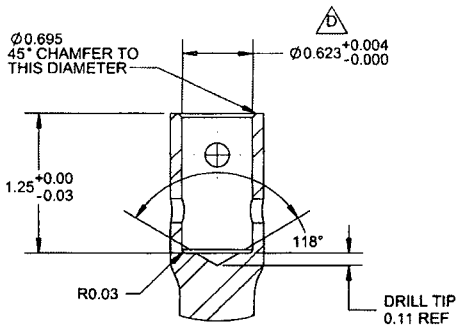
D3688-1 STUD

RELEASED
2013 -01- 22

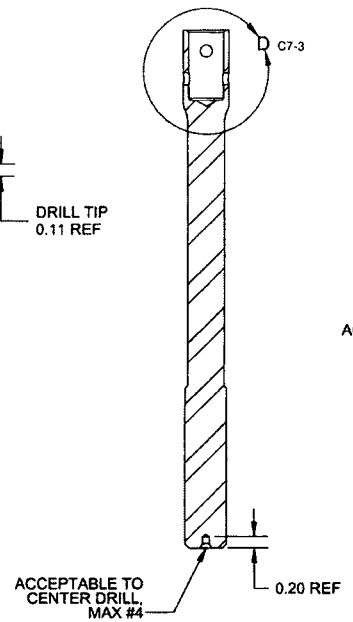
NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 1.24 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD**	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO. D3688	REV. D
MFG. APPR.	JLM		SHEET 2 OF 5
APPROVED		TITLE STUD	SCALE NTS
DE APPR.			
DATE 12.12.05			

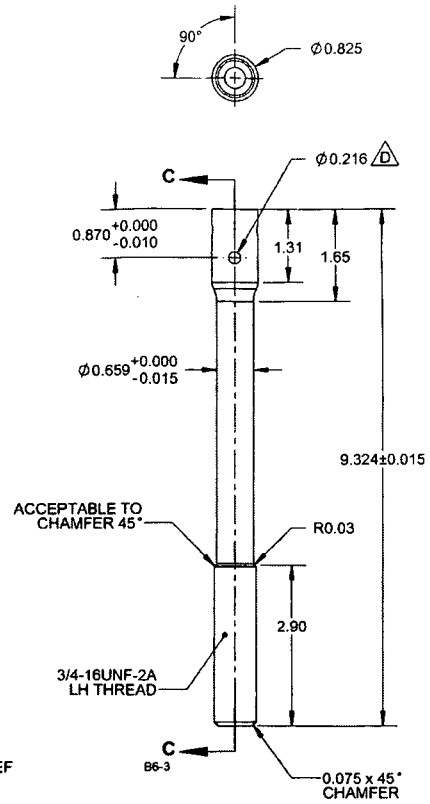
96692

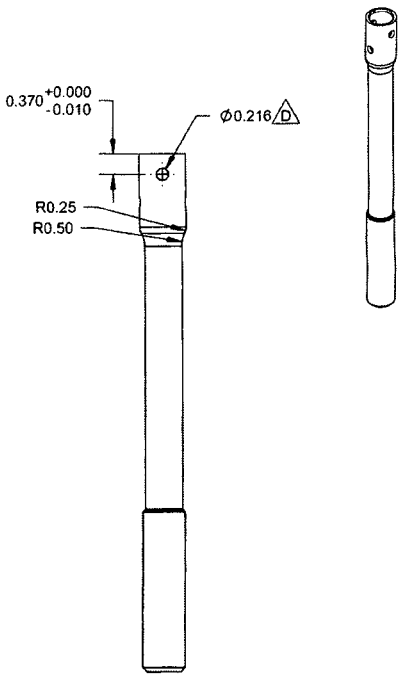


DETAIL D D6-3
SCALE 2X



SECTION C-C
D4-3





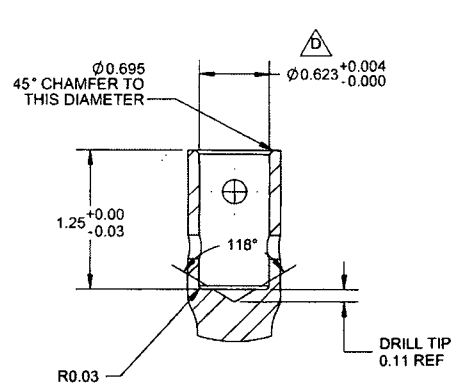
D3688-3 STUD

RELEASED
2013 -01- 22

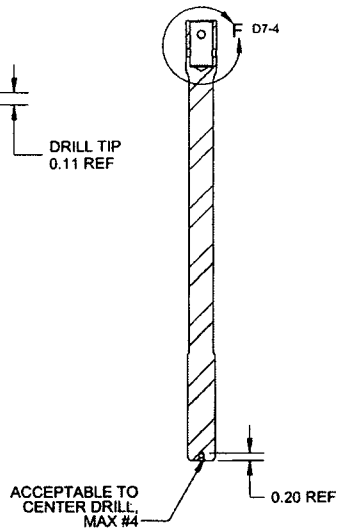
NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.97 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD**	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO. D3688	REV. D
MFG. APPR.	JLM		SHEET 3 OF 5
APPROVED		TITLE STUD	SCALE NTS
DE APPR.			
DATE 12.12.05			

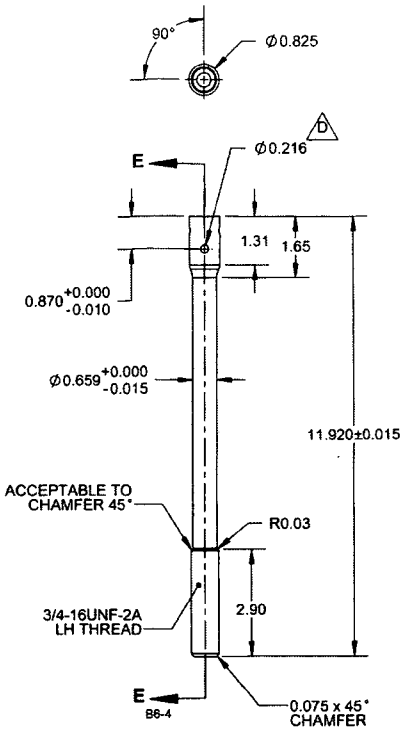
96692

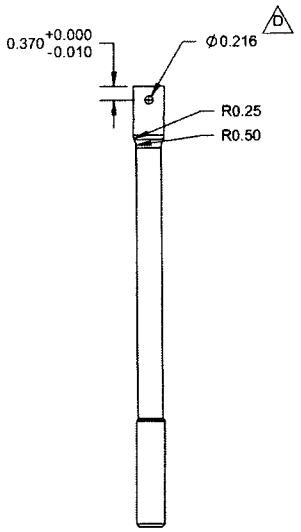


DETAIL F D6-4
SCALE 3X



SECTION E-E D4-4





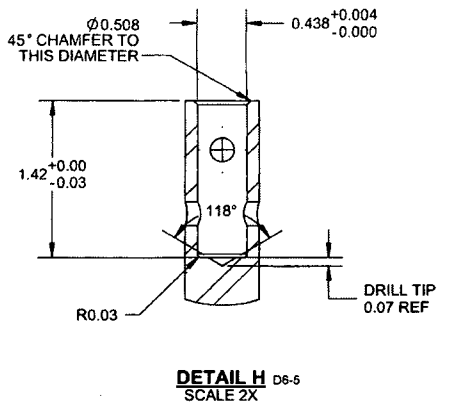
D3688-5 STUD

RELEASED
2013 -01- 22

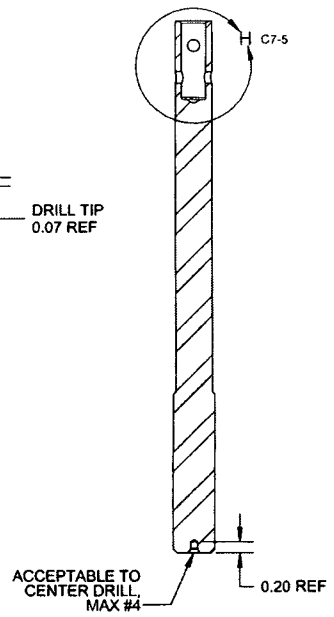
NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 1.22 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD**
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA
CHECKED	MB	DRAWING NO. D3688 — REV. D
MFG. APPR.	JLM	SHEET 4 OF 5
APPROVED		TITLE STUD — SCALE NTS
DE APPR.		
DATE	12.12.05	

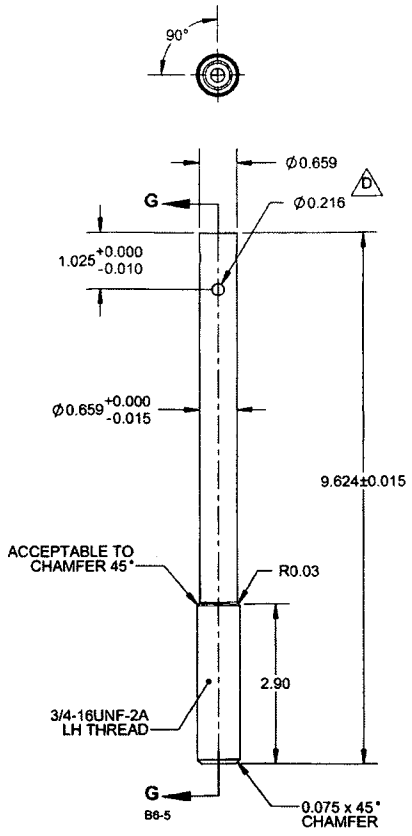
96692

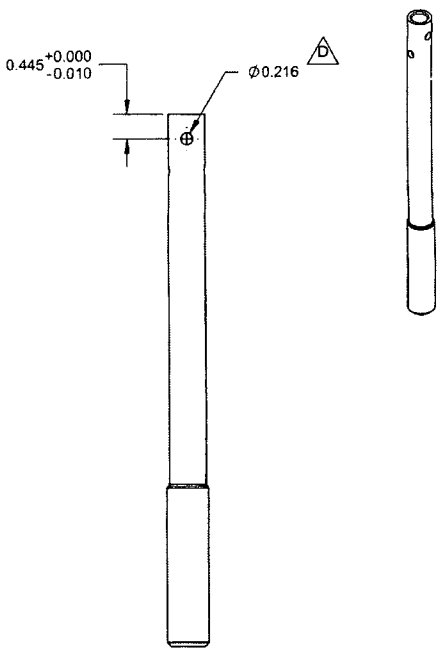


DETAIL H D6-5
SCALE 2X



SECTION G-G B4-5





D3688-7 STUD

RELEASED
2013 -01- 22

NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.96 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	DB	
CHECKED	MB	DRAWING NO. D3688 REV. D
MFG. APPR.	JLM	SHEET 5 OF 5
APPROVED		TITLE STUD SCALE NTS
DE APPR.		
DATE	12.12.05	

LIQUID PENETRANT TEST REPORT

P- 12697

ACUREN

PAGE 1 OF 1

CLIENT: DAT AEROSPACE
ATTENTION: MAT / ANDY
ADDRESS: 470 ABERDEEN, HAWKESBURY, ON
DATE: FEB 26-2013 TIME: AM ☑ PM ☐
ACUREN JOB NO.: 198 - 13 - C0045
PO/WO NO.: —
WORK LOCATION: HAWKESBURY -
ACCEPTANCE STD: ASTM 1417/QSI-038 REV./DATE: 2005
PROJECT: FPI ON CROSS TUBES & MACHINED STUDS
ITEM(S) EXAMINED: (8) (24)

JOB DESCRIPTION | PROCEDURE NO. LT-XXXX REV./DATE | TECHNIQUE NO. LT-XXXX-XXX REV./DATE

PART NO.: SEE RESULTS MATERIAL: STAINLESS STEEL + (ALUMINUM) THICKNESS: VARIOUS
SCOPE: A WET FLUORESCENT LIQUID DYE PENETRANT WAS COMPLETED 100% ON THE SURFACE ONLY.

TEST DETAILS

METHOD	☑ FLUORESCENT ☐ VISIBLE		☑ WATER WASH	☐ SOLVENT REMOVABLE	☐ POST EMULSIFIED
FAMILY BRAND	MAGNAFLUX		BLACK LIGHT S/N 16059	☐ OUTPUT > 1000 µ W/CM²	☐ AMBIENT < 2 fc
PENETRANT	ZL67	MINIMUM DWELL TIME 45/10 MIN.	LIGHTING EQUIP.	☐ FLASHLIGHT ☐ TROUBLELIGHT	☐ OUTPUT>100 fc @ SURFACE
PENETRANT REMOVER	H2O	MINIMUM DRY TIME >10 MIN.	OTHER	LABINO	
DEVELOPER	SKD S2	MINIMUM DWELL TIME 10 MIN.	LIGHT METER S/N	10988 C06	CAL DUE DATE
DEVELOPER TYPE	☑ NON AQUEOUS ☐ AQUEOUS ☐ DRY				

TEST SURFACE

SURFACE CONDITION	☐ AS GROUND	☐ AS WELDED	☑ MACHINED	☐ SHOT BLASTED	☑ CLEAN BARE METAL
SURFACE TEMPERATURE	☐ < -4°C/ 20°F	☐ -4°C/ 20°F TO 10°C/50°F		☑ 10°C/50°F TO 52°C/125°F	☐ > 52°C/125°F

RESULTS- (☑ METRIC ☐ IMPERIAL)

ITEM	COMMENTS	ACCEPT	REJECT
	CROSS TUBES W.O.#		
1	" " 96690	✓	
1	" " 96691	✓	
1	" " 96875	✓	
1	" " 96876	✓	
1	" " 97422	✓	
1	" " 96723	✓	
1	" " 91854	✓	
1	" " 90046	✓	
10	STUD W.O.# 96692	✓	
6	" " " 81746	✓	
8	" " " 82377	✓	

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE: Steve Paquette (PRINT) (SIGNATURE)
TECHNICIAN (SIGNATURE):
NAME (PRINT): Mike Ethurston (1ST TECHNICIAN)
CGSB LEVEL II SNT LEVEL — CGSB REG. NO 6606
2ND TECHNICIAN — CGSB LEVEL — SNT LEVEL — CGSB REG. NO —

DTR # E637502
REPORT REVIEWED BY:
NAME INITIALS

WHITE – CLIENT COPY CANARY – OFFICE COPY PINK – TECHNICIAN COPY GOLD – OFFICE COPY

Work Order ID 81746
March-16-12 3:19:40 PM

81746

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: STUD
Start Date: 16/03/2012 **Start Qty:** 6.00 *6*
Required Date: 23/04/2012 **Req'd Qty:** 6.00 *6*
Reference:
Cust Item ID:
Customer:

Approvals: **Process Plan:** MCJ **Date:** 12/03/19 **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr / **Revision Nbr**: D3688 / Rev C 15									
100		0.00							
100	BAND SAW					6	ϕ		
Bandsaw	**Memo**	0.00							
Jeaspa Bandsaw	***DO NOT USE CHOP SAW*** Cut blank 12.020" long SJ 12/6/16								
110		0.00							
110	DOOSAN LATHE					6	ϕ		DAS 13 89
Doosan	**Memo**	0.00							
Doosan Lathe	1-Turn as per Folio FA719 Rev: ____ & Dwg D3688 Rev: ____ 2-Deburr per dwg D3688 3-Check .625" bore with DT9530 GO/NO GO Gauge 13-2-16								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120						6	ϕ		DAS 13 89
QC	**Memo**	0.00							
Quality Control	13-2-16								

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 81746

March-16-12 3:19:40 PM

81746

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: STUD

Start Date: 16/03/2012 **Start Qty:** 6.00 *6* **Cust Item ID:**

Required Date: 23/04/2012 **Req'd Qty:** 6.00 *6* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop** *NR2*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC8- Inspect parts - second check	0.00							
170			DD	B-2-26		6	4		
QC	**Memo**	0.00							
Quality Control	100% CHECK,CHECK ALL DIMENSIONS AND THREAD FIT								
180		0.00							
180	PURCHASING								
Purchasing	**Memo**	0.00							
Purchasing	Issue P/O: 19183 LPI Per ASTM 1417 LEVEL 2Certificate of conformaty is required								
190	Receive & Inspect for Damage & Mat'l Certs	0.00							
190									
Packaging	**Memo**	0.00							
Packaging	Ensure certificate of conformity is attached								

CY 13/02/26 (6)

bX SP 13-2-26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Item ID: D3688-5
Revision ID:
Item Name: STUD
Start Date: 16/03/2012 **Start Qty:** 6.00 *6*
Required Date: 23/04/2012 **Req'd Qty:** 6.00 *6*
Reference:

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	**Memo**	0.00							
Quality Control									
210	Identify as per dwg & Stock Location:_____	0.00							
210									
Packaging	**Memo**	0.00							
Packaging									
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	**Memo**	0.00							
Quality Control									

sel wo 97836

le 130228

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

March-16-12 3:19:44 PM

Work Order ID: 81746

81746

Parent Item: D3688-5

D3688-5

Parent Item Name: STUD

Start Date: 16/03/2012 **Required Date:** 23/04/2012

Start Qty: 6.00 **Required Qty:** 6.00

Comments: Rev:A New Issue 08-01-29 JLM Veriified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000		Purchased	No			100	f	45.2000	1.087	6.865263			
M174PH-H900R1.000									**	5	121610		

17-4SS H900 ROUND BAR 1.00

Location	Loc Qty	Loc Code	
MAT030	45.2		
117445	21.2		
120767	24		

121280

121918

1 Feet

5.5 ft

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	81746
Description: Stud	Part Number:	D3688-5
Inspection Dwg: D3688 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.690	✓		1-4	Velm
~~.0.625~~ .623	+0.004/-0.000	.625	✓			
1.25	+0.000/-0.03	1.235	✓			
118°	0.5°	118°	✓			
R0.03	+/-0.030	R.03	✓			
0.11 (Ref)	+/-0.030	.11	✓			
90°	0.5°	90°	✓			
~~Ø0.189~~ Ø.216	+0.005/-0.001	.216	✓			
1.31	+/-0.030	1.325	✓			
1.65	+/-0.030	1.65	✓			
0.870	+0.000/-0.010	.867	✓			
Ø0.659	+0.000/-0.015	.650	✓		1-5	M.C
11.920	+/-0.015	11.921	✓		1-5	Velm 12"
2.90	+/-0.030	2.890	✓			
3/4-16UNF-2A	N/A		✓			
0.075 x 45°	+/-0.010 x 0.5°	.075 x 45°	✓			
0.370	+0.000/-0.010	.367	✓			
~~Ø0.189~~ Ø.216	+0.005/-0.001	.216	✓			
R0.25	+/-0.030	R.25	✓		R.G	
R0.50	+/-0.030	R.50	✓		R.G.	
0.20	+/-0.030	.225	✓		~~1-5~~	
.825	~~+/-0.030~~ +/-0.010 x 0	.824	✓			

Measured by:	EL SVB	Audited by:	EP
Date:	13-2-16	Date:	13.2.20

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	
C	11.10.13	Dimension 0.20 added	KJ	

Dart Aerospace Ltd

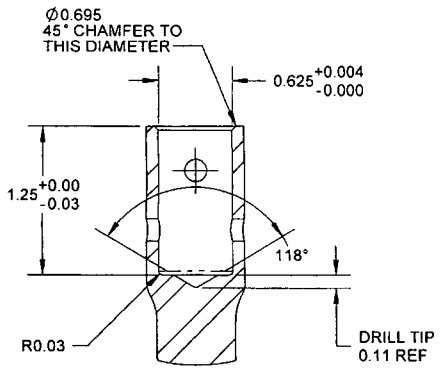
W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

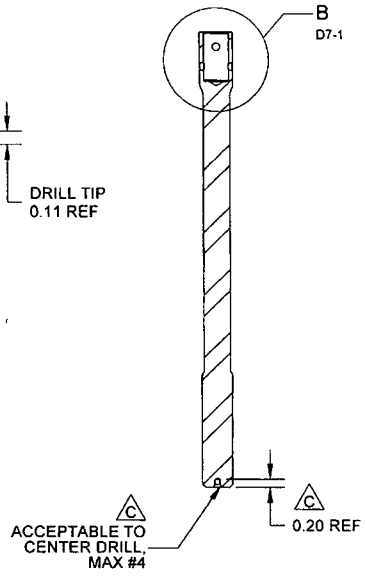
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

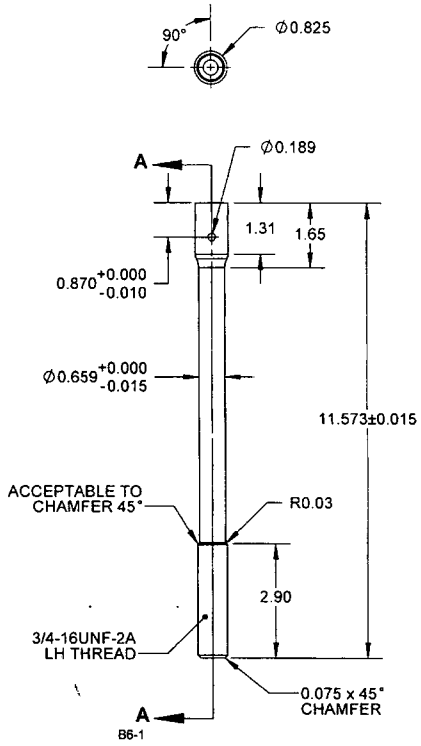
NOTE: Date & initial all entries

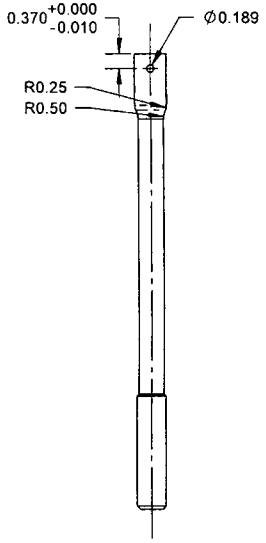


DETAIL B
SCALE 3X
D6-1



SECTION A-A
D4-1





SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 81746 MLS
12/03/19

RELEASED
2009 -09- 22

D3688-1 STUD

NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 1.24 lb
C 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

REV.	DESCRIPTION	BY	DATE
C	0.20 WAS 0.16 (ZN B5-1, B5-2, B6-3, B5-4); CENTER DRILL #4 WAS CENTER DRILL #2 (ZN B6-1, B6-2, B6-3, B6-4); UPDATE NOTE 8 TO REF QSI (ZN A8-1, A8-2, A8-3, A8-4)	RF	09.09.09
B	CHANGE TO 17-4PH H-900 (ZN A8-1, A8-2, A8-3, A4-4); REDUCE LENGTH ON D3688-1 FROM 12.073 TO 11.573 (ZN C3-1) BASED ON PROTOTYPE INSTALL; Ø0.695 WAS Ø0.665 (ZN D8-1, D8-2, D8-3); Ø0.508 WAS Ø0.478 (ZN D8-4); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3688	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		STUD	NTS
DATE	09.09.09		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

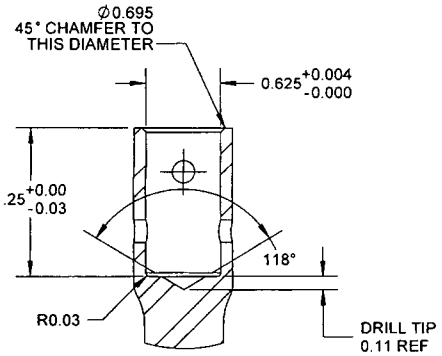
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

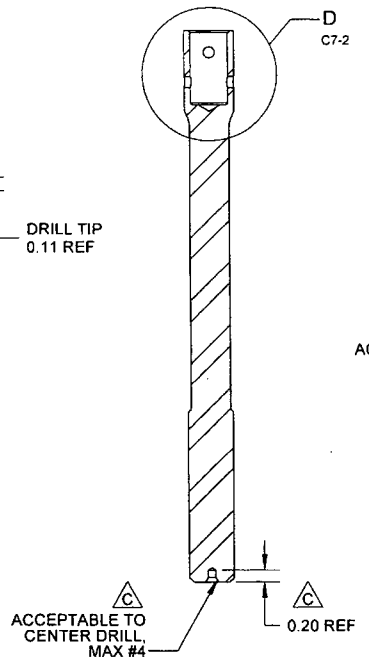
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

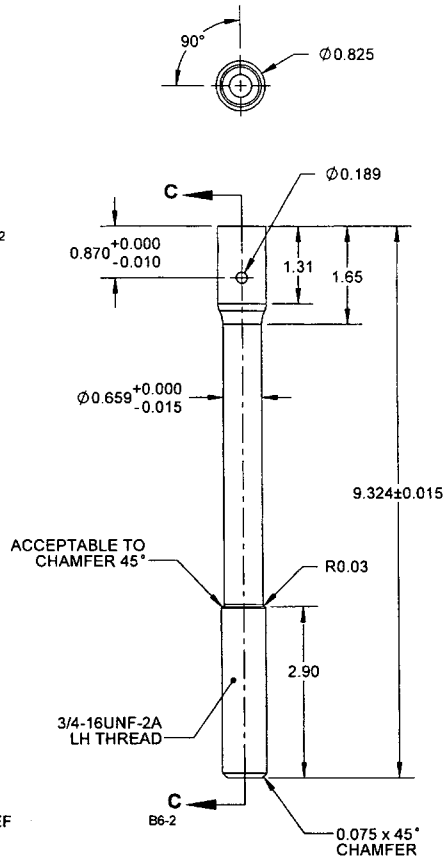
81746

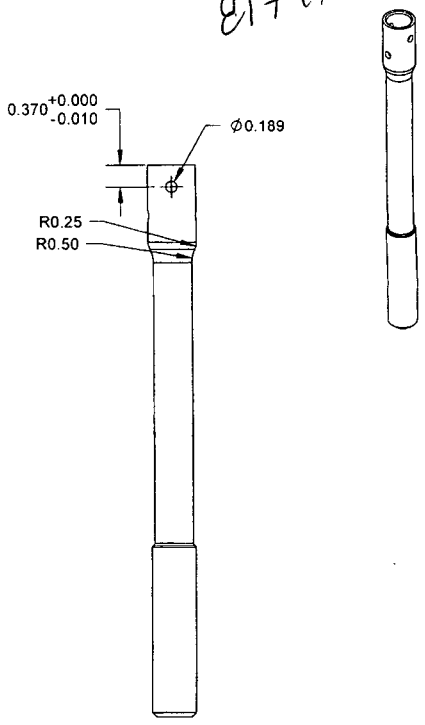


DETAIL D
SCALE 2X
D6-2



SECTION C-C
D4-2





D3688-3 STUD

RELEASED
2009 -09- 22

NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.97 lb
△C 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D3688 REV. C
CHECKED		SHEET 2 OF 4
MFG. APPR.		TITLE STUD SCALE NTS
APPROVED		
DE APPR.		
DATE	09.09.09	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

LIQUID PENETRANT TEST REPORT

P- 12697

ACUREN

PAGE 1 OF 1

CLIENT: DANT AEROSPACE
ATTENTION: MAT / ANDY
ADDRESS: 1270 ABERDEEN, HAWKESBURY, ON
DATE: FEB 26-2013 TIME: AM ☑ PM ☐
ACUREN JOB NO.: 198 - 13 - C0045
PO/WO NO.: —
WORK LOCATION: HAWKESBURY -
ACCEPTANCE STD: ASTM 1417/QSI-038 REV./DATE: 2005
PROJECT: FPI ON CROSS TUBES & MACHINED STUDS
ITEM(S) EXAMINED: (8) (24)

JOB DESCRIPTION | PROCEDURE NO. LT-XXXX REV./DATE | TECHNIQUE NO. LT-XXXX-XXX REV./DATE

PART NO.: SEE RESULTS
MATERIAL: STAINLESS STEEL + ALUMINUM THICKNESS: VARIOUS
SCOPE: A WET FLUORESCENT LIQUID DYE PENETRANT WAS COMPLETED 100% ON THE SURFACE ONLY.

TEST DETAILS

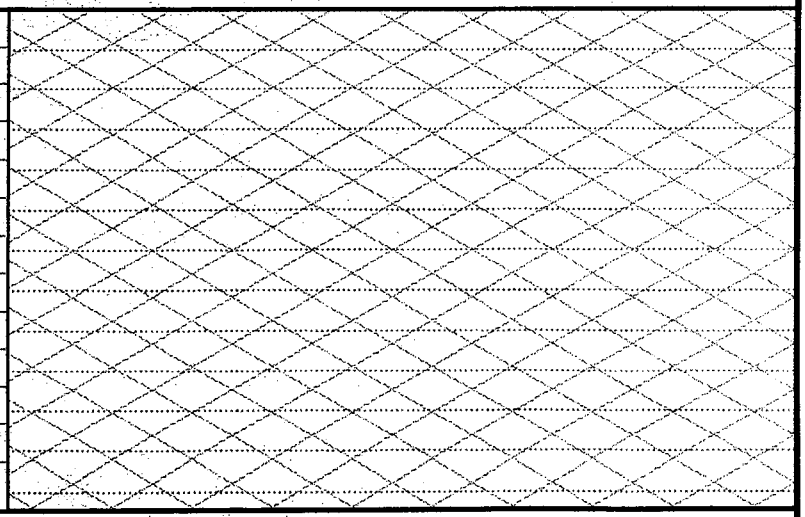
METHOD	☑ FLUORESCENT	☐ VISIBLE			☑ WATER WASH	☐ SOLVENT REMOVABLE	☐ POST EMULSIFIED
FAMILY BRAND	MAG-MAFLUX				BLACK LIGHT S/N 16059	☐ OUTPUT > 1000 µ W/CM²	☐ AMBIENT < 2 fc
PENETRANT	2-L67	MINIMUM DWELL TIME	45/10	MIN.	LIGHTING EQUIP.	☐ FLASHLIGHT ☐ TROUBLELIGHT	☐ OUTPUT>100 fc @ SURFACE
PENETRANT REMOVER	H2O	MINIMUM DRY TIME	>10	MIN.	OTHER	LABINO	
DEVELOPER	SKD52	MINIMUM DWELL TIME	10	MIN.	LIGHT METER S/N	10988 C66	CAL DUE DATE
DEVELOPER TYPE	☑ NON AQUEOUS	☐ AQUEOUS	☐ DRY				

TEST SURFACE

SURFACE CONDITION	☐ AS GROUND	☐ AS WELDED	☑ MACHINED	☐ SHOT BLASTED	☑ CLEAN BARE METAL
SURFACE TEMPERATURE	☐ < -4°C/ 20°F	☐ -4°C/ 20°F TO 10°C/50°F		☑ 10°C/50°F TO 52°C/125°F	☐ > 52°C/125°F

RESULTS- (☑ METRIC ☐ IMPERIAL)

ITEM	COMMENTS	ACCEPT	REJECT
	CROSS TUBES W.O.#		
1	" " 966 90	✓	
1	" " 966 91	✓	
1	" " 968 75	✓	
1	" " 968 76	✓	
1	" " 974 27	✓	
1	" " 967 22	✓	
1	" " 918 54	✓	
1	" " 900 46	✓	
10	STUD W.O.# 966 92	✓	
6	" " " 817 46	✓	
8	" " " 827 77	✓	



Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE: Steve Paquette (PRINT) _____ (SIGNATURE) DTR # E63752

TECHNICIAN (SIGNATURE): _____

NAME (PRINT): Mike Johnston (1ST TECHNICIAN) _____ (2ND TECHNICIAN)

CGSB LEVEL II SNT LEVEL _____ CGSB LEVEL _____ SNT LEVEL _____

CGSB REG. NO 6606 CGSB REG. NO _____

REPORT REVIEWED BY:

NAME INITIALS

WHITE – CLIENT COPY CANARY – OFFICE COPY PINK – TECHNICIAN COPY GOLD – OFFICE COPY

PT Sept 2005

Work Order ID -82377

March-30-12 7:43:36 AM

82377

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: STUD

Start Date: 29/03/2012 **Start Qty:** 8.00 *8*

Required Date: 12/04/2012 **Req'd Qty:** 8.00 *8*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** WLJ **Date:** 12/03/30 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3688	Rev C D								
100		0.00							
100	BAND SAW								
Bandsaw	**Memo**	0.00							
Jeaspa Bandsaw	***DO NOT USE CHOP SAW*** Cut blank 12.020" long								
	SN 126110								
110		0.00							
110	DOOSAN LATHE								DAS 13 2-89
Doosan	**Memo** 12-2-16	0.00							
Doosan Lathe	1-Turn as per Folio FA719 Rev: ____ & Dwg D3688 Rev: ____ 2-Deburr per dwg D3688 3-Check .625" bore with DT9530 GO/NO GO Gauge								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									DAS 13 2-89
QC	**Memo** 12-2-16	0.00							
Quality Control									

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 82377

March-30-12 7:43:36 AM

82377

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: STUD

Start Date: 29/03/2012 **Start Qty:** 8.00 *8* **Cust Item ID:**

Required Date: 12/04/2012 **Req'd Qty:** 8.00 *8* **Customer:**

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC8- Inspect parts - second check	0.00							
170									
QC	**Memo**	0.00			13-2-20	8	8		
Quality Control	100% CHECK,CHECK ALL DIMENSIONS AND THREAD FIT								
180		0.00							
180	PURCHASING								
Purchasing	**Memo**	0.00							
Purchasing	Issue P/O:_____LPI Per ASTM 1417 LEVEL 2Certificate of conformaty is required								
190	Receive & Inspect for Damage & Mat'l Certs	0.00							
190									
Packaging	**Memo**	0.00				8 X			SP
Packaging	Ensure certificate of conformity is attached								13-2-26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 82377

March-30-12 7:43:36 AM

82377

Item ID: D3688-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: STUD

Start Date: 29/03/2012 **Start Qty:** 8.00 *8* **Cust Item ID:**

Required Date: 12/04/2012 **Req'd Qty:** 8.00 *8* **Customer:**

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	**Memo**	0.00							
Quality Control									
210	Identify as per dwg & Stock Location:_____	0.00							
210									
Packaging	**Memo**	0.00							
Packaging									
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	**Memo**	0.00							
Quality Control									

see wo97880

w 13-0228

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

March-30-12 7:43:41 AM

Work Order ID: 82377 *82377*

Parent Item: D3688-5 *D3688-5*

Parent Item Name: STUD

Start Date: 29/03/2012 **Required Date:** 12/04/2012

Start Qty: 8.00 **Required Qty:** 8.00

Comments: Rev:A New Issue 08-01-29 JLM Veriified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000		Purchased	No			100	f	12.9800	1.087	9.153684			
M174PH-H900R1.000									**	5	12/6/10		
17-4SS H900 ROUND BAR 1.00													

Location	Loc Qty	Loc Code	
MAT030	12.98		
117445	1.23		-
120767	11.75		

121280

8.5 ft

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

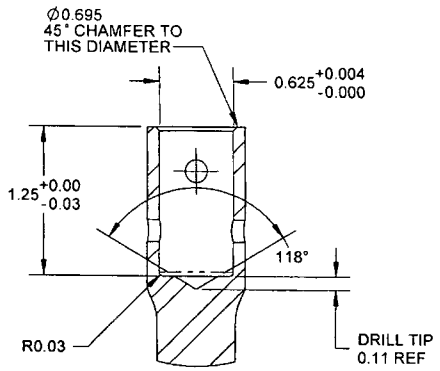
DART AEROSPACE LTD	Work Order:	82377
Description: Stud	Part Number:	D3688-5
Inspection Dwg: D3688 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

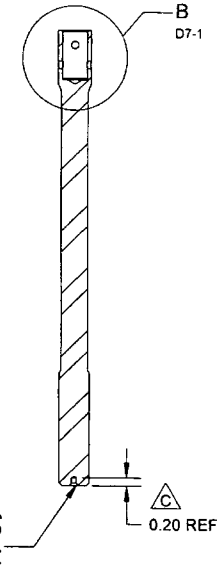
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.692	✓		D-4	Vern
~~0.625~~ .623	+0.004/-0.000	.625	/			
1.25	+0.000/-0.03	1.235	/			
118°	0.5°	118°	/			
R0.03	+/-0.030	R.03	/			
0.11 (Ref)	+/-0.030	.11	/			
90°	0.5°	90°	/			
~~Ø0.189~~ .216	+0.005/-0.001	.216	/			
1.31	+/-0.030	1.31	✓			
1.65	+/-0.030	1.65	/			
0.870	+0.000/-0.010	.866	/			
Ø0.659	+0.000/-0.015	.652	/			
11.920	+/-0.015	11.923	/		D-5	12" Vern
2.90	+/-0.030	2.870	/			
3/4-16UNF-2A	N/A		/			
0.075 x 45°	+/-0.010 x 0.5°	.075 x 45°	/			
0.370	+0.000/-0.010	.367	/			
~~Ø0.189~~ .216	+0.005/-0.001	.216	/			
R0.25	+/-0.030	R.25	/		R.G	
R0.50	+/-0.030	R.50	/		R.G	
0.20	+/-0.030	.225	/			

Measured by:	DAG 13/2/17	Audited by:	DP	Preliminary Approval:	
Date:	13-2-17	Date:	13.2.17	Date:	

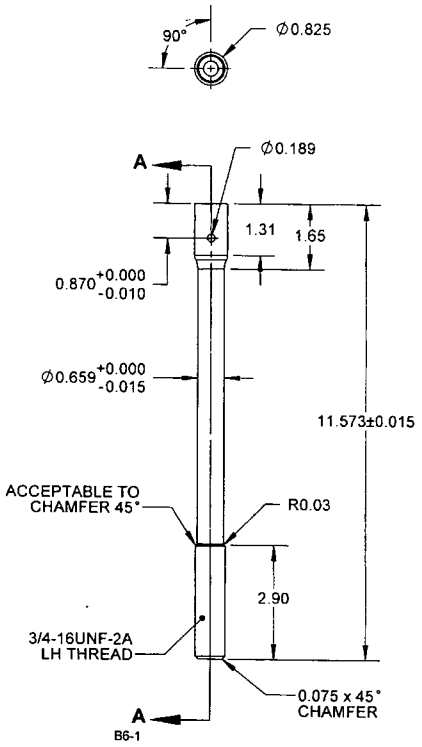
Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	
C	11.10.13	Dimension 0.20 added	KJ	

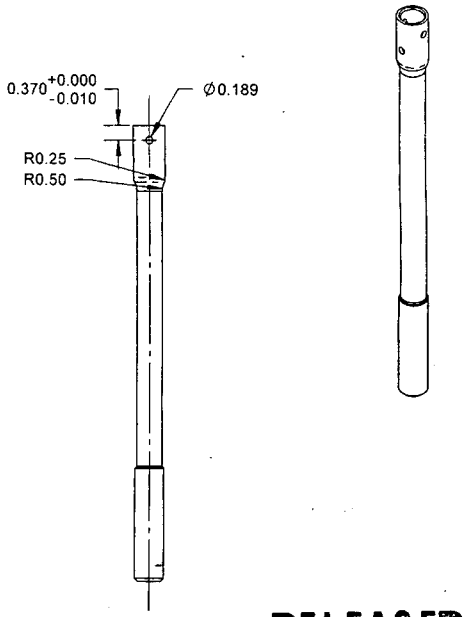


DETAIL B
SCALE 3X
D6-1



SECTION A-A
D4-1





D3688-1 STUD

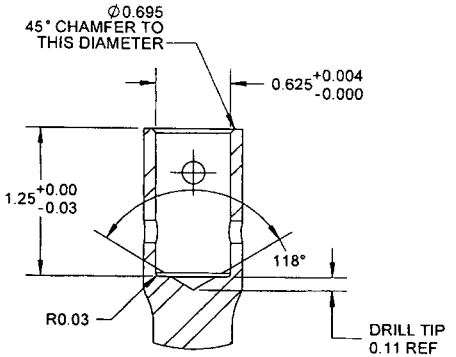
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 82377 MLJ
12/03/30

RELEASED
2009 -09- 22

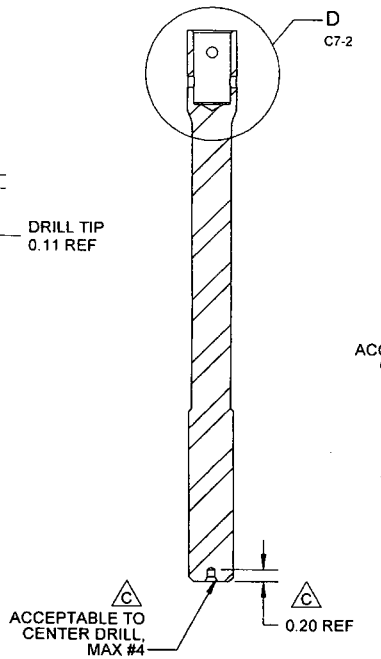
NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 1.24 lb
C 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

REV.	DESCRIPTION	BY	DATE
C	0.20 WAS 0.16 (ZN B5-1, B5-2, B6-3, B5-4); CENTER DRILL #4 WAS CENTER DRILL #2 (ZN B6-1, B6-2, B6-3, B6-4); UPDATE NOTE 8 TO REF QSI (ZN A8-1, A8-2, A8-3, A8-4)	RF	09.09.09
B	CHANGE TO 17-4PH H-900 (ZN A8-1, A8-2, A8-3, A4-4); REDUCE LENGTH ON D3688-1 FROM 12.073 TO 11.573 (ZN C3-1) BASED ON PROTOTYPE INSTALL; Ø0.695 WAS Ø0.665 (ZN D8-1, D8-2, D8-3); Ø0.508 WAS Ø0.478 (ZN D8-4); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22

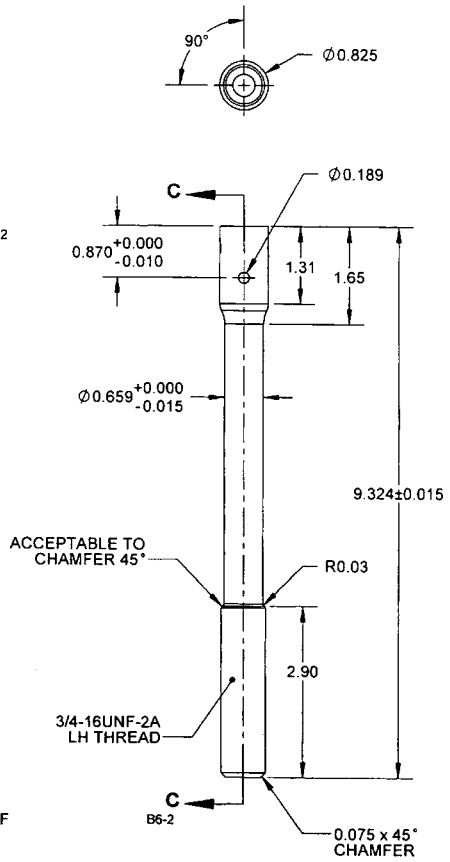
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3688	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		STUD	NTS
DATE	09.09.09		

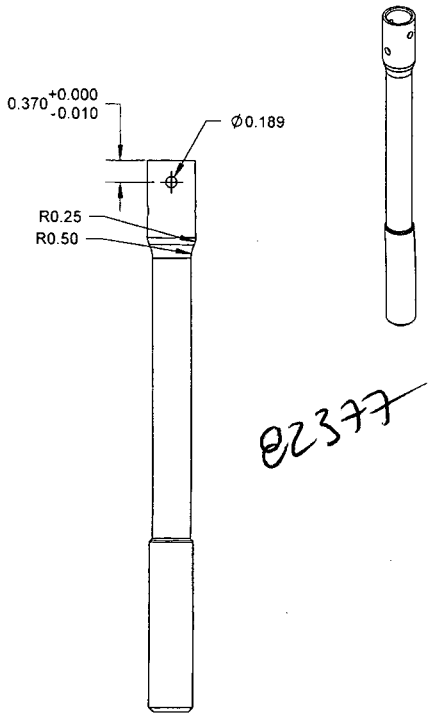


DETAIL D
SCALE 2X
D6-2



SECTION C-C
D4-2





02377

D3688-3 STUD

RELEASED
2009 -09- 22

NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
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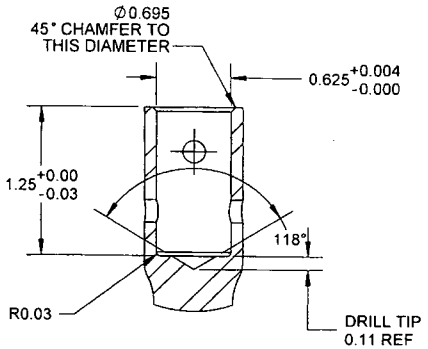
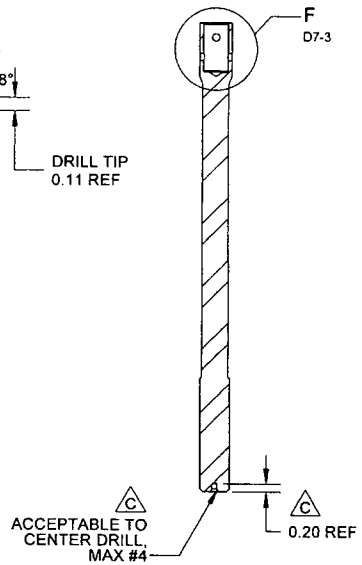
6) IDENTIFICATION: NONE
7) WEIGHT: 0.97 lb
△C 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD**
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3688 REV. C
MFG. APPR.		SHEET 2 OF 4
APPROVED		TITLE STUD SCALE NTS
DE APPR.		
DATE 09.09.09		

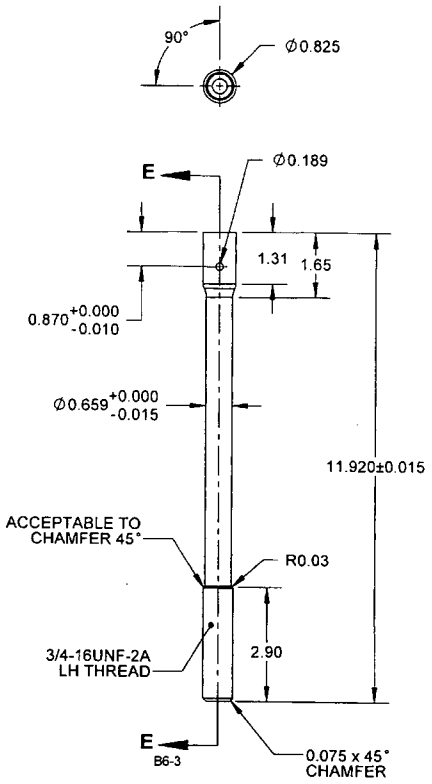
02377

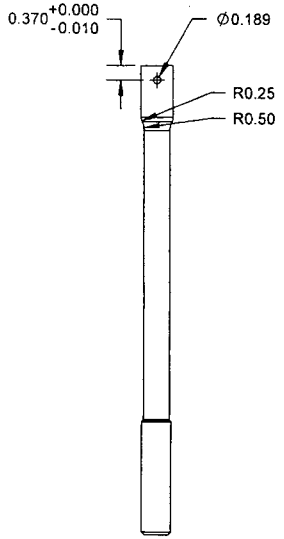


DETAIL F
SCALE 3X
D6-3



SECTION E-E
D4-3





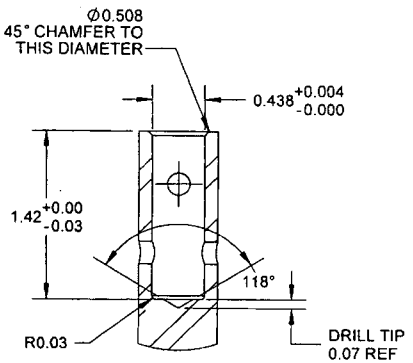
D3688-5 STUD

RELEASED
2009 -09- 22

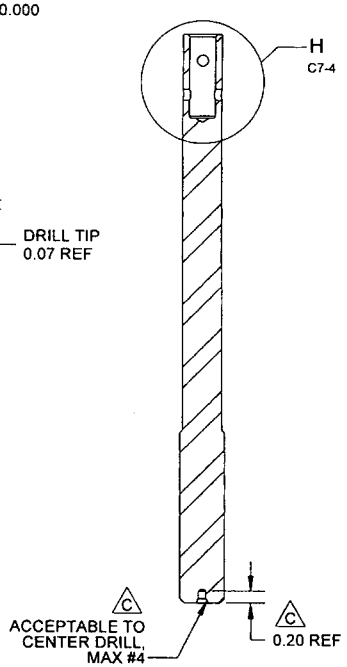
NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 1.26 lb
△C 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D3688 REV. C
MFG. APPR.		SHEET 3 OF 4
APPROVED		TITLE STUD SCALE NTS
DE APPR.		
DATE	09.09.09	

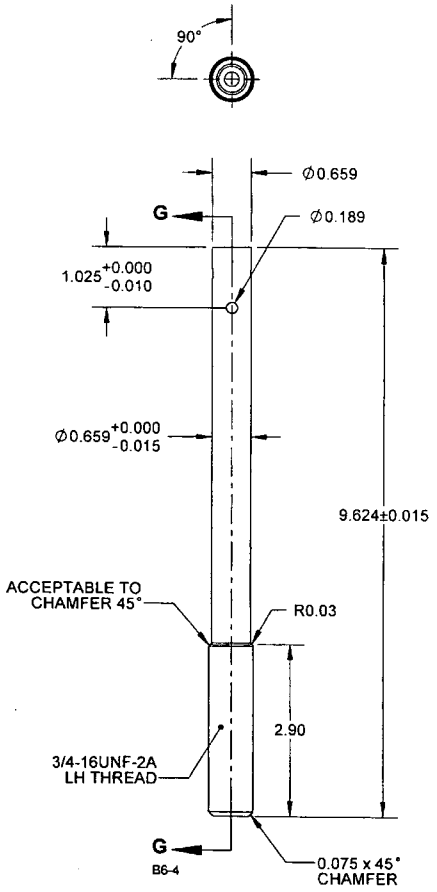
82377



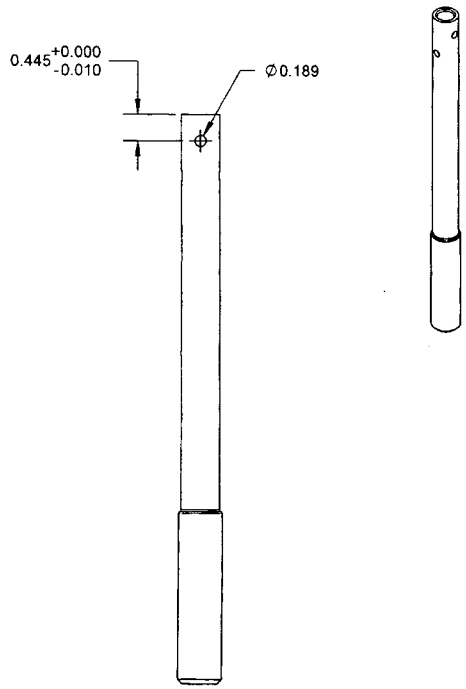
DETAIL H
SCALE 2X
D6-4



SECTION G-G
D4-4



D3688-7 STUD



RELEASED
2009 -09- 22

NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.97 lb
C 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	DART AEROSPACE LTD
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3688 REV. C
MFG. APPR.		SHEET 4 OF 4
APPROVED		TITLE STUD SCALE NTS
DE APPR.		
DATE	09.09.09	

LIQUID PENETRANT TEST REPORT

P- 12697

ACUREN

PAGE 1 OF 1

CLIENT: DAT AEROSPACE
ATTENTION: MAT / ANDY
ADDRESS: 270 ABERDEEN, HAWKESBURY, ON
DATE: FEB 26-2013 TIME: AM ☑ PM ☐
ACUREN JOB NO.: 198 - 13 - C0045
PO/WO NO.: —
WORK LOCATION: HAWKESBURY -
ACCEPTANCE STD: ASTM 1417/QSI-038 REV./DATE: 2005
PROJECT: FPI ON CROSS TUBES & MACHINED STUDS
ITEM(S) EXAMINED: (8) (24)

JOB DESCRIPTION | PROCEDURE NO. LT-XXXX REV./DATE | TECHNIQUE NO. LT-XXXX-XXX REV./DATE

PART NO.: SEE RESULTS
MATERIAL: STAINLESS STEEL + ALUMINUM THICKNESS: VARIOUS
SCOPE: A WET FLOURESCENT LIQUID DYE PENETRANT WAS COMPLETED 100% ON THE SURFACE ONLY.

TEST DETAILS

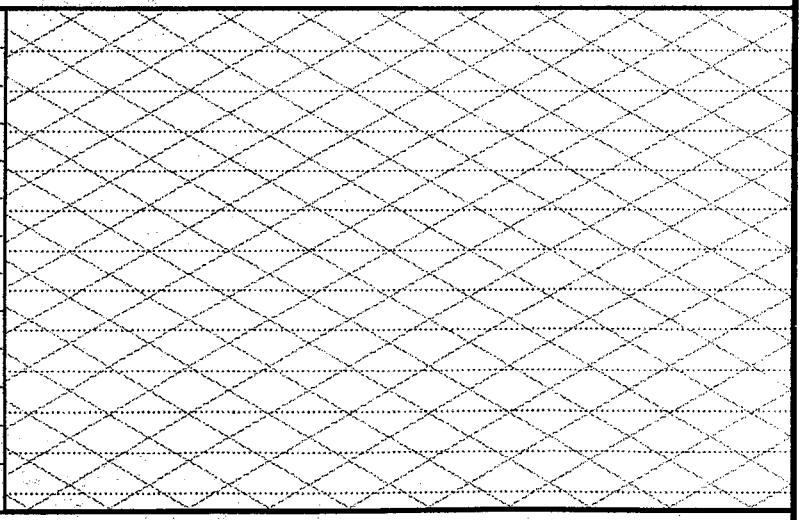
METHOD	☑ FLUORESCENT ☐ VISIBLE			☑ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED	
FAMILY BRAND	MAGNAFLUX			BLACK LIGHT S/N 16609 ☐ OUTPUT > 1000 μW/CM² ☐ AMBIENT < 2 fc	
PENETRANT	ZL-07	MINIMUM DWELL TIME	45/10 MIN.	LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT>100 fc @ SURFACE	
PENETRANT REMOVER	H2O	MINIMUM DRY TIME	>10 MIN.	OTHER LABINO	
DEVELOPER	SKD-S2	MINIMUM DWELL TIME	10 MIN.	LIGHT METER S/N 10988 66	CAL DUE DATE
DEVELOPER TYPE	☑ NON AQUEOUS ☐ AQUEOUS ☐ DRY				

TEST SURFACE

SURFACE CONDITION	☐ AS GROUND	☐ AS WELDED	☑ MACHINED	☐ SHOT BLASTED	☑ CLEAN BARE METAL
SURFACE TEMPERATURE	☐ < -4°C/ 20°F	☐ -4°C/ 20°F TO 10°C/50°F		☑ 10°C/50°F TO 52°C/125°F	☐ > 52°C/125°F

RESULTS- (☑ METRIC ☐ IMPERIAL)

ITEM	COMMENTS		ACCEPT	REJECT
	CROSS TUBES	W.O.#		
1	"	" 96690	✓	
1	"	" 96691	✓	
1	"	" 96875	✓	
1	"	" 96876	✓	
1	"	" 97427	✓	
1	"	" 96722	✓	
1	"	" 91854	✓	
1	"	" 90046	✓	
10	STUD	W.O.# 96692	✓	
6	"	" " 81746	✓	
8	"	" " 82377	✓	



Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE: Steve Paquette (PRINT) — (SIGNATURE)
TECHNICIAN (SIGNATURE):
NAME (PRINT): Mike Johnston (1ST TECHNICIAN) — (2ND TECHNICIAN)
CGSB LEVEL II SNT LEVEL — CGSB LEVEL — SNT LEVEL
CGSB REG. NO 6606 — CGSB REG. NO

DTR # E63752
REPORT REVIEWED BY:
NAME — INITIALS

WHITE – CLIENT COPY CANARY – OFFICE COPY PINK – TECHNICIAN COPY GOLD – OFFICE COPY